

REDUCED CROSS-CONTAMINATION BETWEEN CHAMBERS IN A SEMICONDUCTOR PROCESSING TOOL

Abstract of the Disclosure

In accordance with one aspect of the present invention, a method is provided for transporting a workpiece in a semiconductor processing apparatus comprising a transfer chamber, a process chamber, and a gate valve between the transfer chamber and the process chamber. The method comprises vacuum pumping the transfer chamber to achieve a first pressure in the transfer chamber and vacuum pumping the process chamber to achieve a second pressure in the process chamber. An inert gas is flowed into the transfer chamber and shut off in the process chamber. The transfer chamber is isolated from pumping, but pumping continues from the process chamber. The gate valve is opened after isolating the transfer chamber from pumping. The workpiece is then transferred between the transfer chamber and the process chamber. A definitive flow direction from transfer chamber to process chamber is thereby achieved, minimizing risk of back-diffusion.

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